



JPW  
#

**PATENT APPLICATION**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re application of

Docket No: Q78644

Yasunori BITO

Allowed: February 15, 2006

Appln. No.: 10/720,094

Group Art Unit: 2826

Confirmation No.: 4905

Examiner: Thomas L. DICKEY

Filed: November 25, 2003

For: HETEROJUNCTION FIELD EFFECT TYPE SEMICONDUCTOR DEVICE HAVING  
HIGH GATE TURN-ON VOLTAGE AND LOW ON-RESISTANCE AND ITS  
MANUFACTURING METHOD

**INFORMATION DISCLOSURE STATEMENT**  
**UNDER 37 C.F.R. §§ 1.97 and 1.98**

**MAIL STOP ISSUE FEE**

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

Sir:

In accordance with the duty of disclosure under 37 C.F.R. § 1.56, Applicant hereby  
notifies the U.S. Patent and Trademark Office of the documents which are listed on the attached  
PTO/SB/08 A & B (modified) form and listed herein and which the Examiner may deem  
material to patentability of the claims of the above-identified application.

1. Japanese Patent Application Publication No. 54-21283, published February 17, 1979  
(with English abstract).
2. Japanese Patent Application Publication No. 2001-250939, published September 14,  
2001 (with English abstract), previously submitted in an Information Disclosure  
Statement dated October 17, 2005.

One copy of above listed reference 1 is submitted herewith. A copy of above listed  
reference 2 is not submitted herewith as it has been previously submitted.

INFORMATION DISCLOSURE STATEMENT

U.S. Appln. No.: 10/720,094

Atty. Docket No.: Q78644

The present Information Disclosure Statement is being filed after either a Final Office Action, Notice of Allowance, or an action that otherwise closes prosecution in the application (whichever is earlier), but before payment of the Issue Fee, and therefore Applicant is submitting herewith a check for the fee of \$180.00 under 37 C.F.R. § 1.17(p), and a Statement Under 37 C.F.R. § 1.97(e).

In compliance with the concise explanation requirement under 37 C.F.R. § 1.98(a)(3) for foreign language documents, Applicant encloses herewith a copy of a corresponding Japanese Office Action, dated January 30, 2006, and an English translation of the pertinent portions thereof which cites above listed references 1 and 2 and indicates the degree for relevance found by the foreign office.

The submission of the listed documents is not intended as an admission that any such document constitutes prior art against the claims of the present application. Applicant does not waive any right to take any action that would be appropriate to antedate or otherwise remove any listed document as a competent reference against the claims of the present application.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account. A duplicate copy of this paper is attached.

SUGHRUE MION, PLLC  
Telephone: (202) 293-7060  
Facsimile: (202) 293-7860

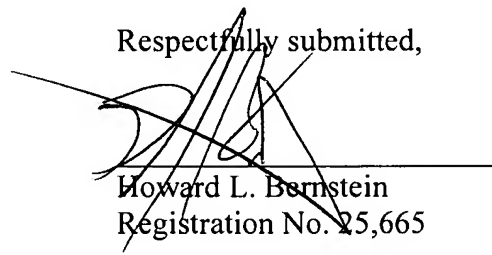
WASHINGTON OFFICE

**23373**

CUSTOMER NUMBER

Date: March 15, 2006

Respectfully submitted,

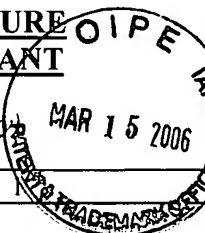


Howard L. Bernstein  
Registration No. 25,665

Substitute for Form 1449 A &amp; B/PTO

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

(use as many sheets as necessary)

*Complete if Known*

Application Number	10/720,094
Confirmation Number	4905
Filing Date	November 25, 2003
First Named Inventor	Yasunori BITO
Art Unit	2826
Examiner Name	Thomas L. DICKEY
Attorney Docket Number	Q78644

Sheet

1

of

1

**U.S. PATENT DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Document Number		Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document
		Number	Kind Code <sup>2</sup> (if known)		
		US			
		US			
		US			
		US			
		US			
		US			
		US			
		US			
		US			

**FOREIGN PATENT DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document			Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Translation <sup>6</sup>
		Country Code <sup>3</sup>	Number <sup>4</sup>	Kind Code <sup>5</sup> (if known)			
		JP	54-21283	A	02-17-1979	Mitsubishi Electric Corp	

**NON PATENT LITERATURE DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city, and/or country where published.	Translation <sup>6</sup>

Examiner Signature

Date Considered

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup>Applicant's unique citation designation number (optional). <sup>2</sup>See Kind Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov), MPEP 901.04 or in the comment box of this document. <sup>3</sup>Enter Office that issued the document, by the two-letter code (WIPO Standard ST. 3). <sup>4</sup>For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup>Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup>Applicant is to indicate here if English language Translation is attached.

Q78644

Note (for the cited literature, see the List of Cited Literature)

(Claims) 1, 2, 6, and 10

(Reasons) 1 and 2

(Cited literature) 1

(Remarks) Comparing the invention according to the aforementioned claims and the invention described in Cited Literature 1, there are no points of difference between the two inventions.

(Claims) 1, 3, and 5–15

(Reasons) 1 and 2

(Cited literature) 2

(Remarks) Comparing the invention according to the aforementioned claims and the invention described in Cited Literature 2, there are no points of difference between the two inventions.

(Claims) 3 and 4

(Reasons) 2

(Cited literature) 1 and 2

(Remarks) Comparing the invention according to the aforementioned claims and the invention described in Cited Literature 1, the two inventions differ in the point that the invention according to the aforementioned claims has a “second recess,” while the invention described in Cited Literature 1 does not have a “second recess.”

However, Cited Literature 2 describes an invention having a “second recess,” and applying this to the invention described in Cited Literature 1 is a matter which could be easily conceived of by a person skilled in the art.

#### List of Cited Literature

1. Japanese Unexamined Patent Application Publication S54-21283
  2. Japanese Unexamined Patent Application Publication 2001-250939
- 

#### Record of Prior Art Literature Search Results

• Fields searched	IPC H01L	21/33
		29/70–80

This Record of Prior Art Literature Search Results does not constitute a reason for rejection.



**PATENT APPLICATION**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re application of

Docket No: Q78644

Yasunori BITO

Appln. No.: 10/720,094

Group Art Unit: 2826

Confirmation No.: 4905

Examiner: Thomas L. DICKEY

Filed: November 25, 2003

For: HETEROJUNCTION FIELD EFFECT TYPE SEMICONDUCTOR DEVICE HAVING  
HIGH GATE TURN-ON VOLTAGE AND LOW ON-RESISTANCE AND ITS  
MANUFACTURING METHOD

**STATEMENT UNDER 37 C.F.R. § 1.97(e)**


Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

The undersigned hereby states, upon information and belief:

That each item of information contained in the Information Disclosure Statement filed  
concurrently herewith was first cited in any communication from a foreign patent office in a  
counterpart foreign application not more than three months prior to the filing of said Information  
Disclosure Statement, except for those indicated as being previously submitted.

Respectfully submitted,

  
Howard L. Bernstein  
Registration No. 25,665

SUGHRUE MION, PLLC  
Telephone: (202) 293-7060  
Facsimile: (202) 293-7860

WASHINGTON OFFICE

**23373**

CUSTOMER NUMBER

Date: March 15, 2006